

three strands of DNA. According to claim 12, paragraph (a)(4) these three strands are conductive. Thus, three conductive segments of DNA were examined previously pursuant to examination of claim 12.

B. Active Grain

Applicants respectfully invite the Examiner's attention to claim 12, paragraph (a)(3), which recites "active cores." Applicants assert that the term "active cores" is synonymous with "grain" or "active grain." *Compare* page 10, lines 3-5 (grain 205) and Figure 2 *with* page 12, lines 5-7 (active core 324) and Figure 3B. Therefore, the term "active grain" has already been examined in connection with examination of claim 12.

C. Bare DNA Segment

Applicants again respectfully invite the Examiner's attention to claim 12. Paragraphs (a)(3) and (a)(5) describe a protection/deprotection process by which the active core is formed with a bare DNA segment. The process involves combining the DNA with enzymes that bind the active core to protect it from transformation to a current conductor. Thus, an active core consisting of a bare DNA segment has already been examined in this application pursuant to examination of claim 12.

II. Telephonic Interview

On May 19, 2004, Examiner Marschel kindly returned a phone call from Applicant's Agent, Dr. Guy F. Birkenmeier and granted a spontaneous interview. During this conversation, Applicant's Agent presented an argument substantially the same as set forth above regarding the Office Communication. Examiner Marschel graciously acknowledged that new claims 19-29, drawn to circuits and methods of manufacturing circuits, presented in Applicant's

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